

REMARKS

Claims

Claims 1-69 were pending at the time of the Office Action. As a result of the amendments made above:

- 1) Claim 1 is amended to change “control means” (at least as initially presented) to “means for controlling the apparatus,” to overcome the 35 USC 112, sixth paragraph, rejection; and to delete the repeated language of the “defibrillator”.
- 2) Claims 2-4 are amended to positively recite how the defibrillator and fibrillation detectors perform their functions; and
- 3) Claims 15 and 16 are amended analogously to claims 2-4;
- 4) Claims 28, 50 and 63 are cancelled as being duplicative of other claims already present in the case, and claims 9 and 33 are amended to prevent them from being duplicative.

Claims 1-27, 29-49, 51-62, and 64-69 are currently pending in the application.

Information Disclosure Statement

The Examiner’s review of the Information Disclosure Statement is gratefully acknowledged.

Drawings

The review and approval of the drawings is gratefully acknowledged.

Allowable Subject Matter

The Examiner has indicated that claims 3-5, 8-12, 15-20, 22, 23, 25-27, 30-32, 34-45, 47-62, 64-69 would be allowable if in independent form and the Section 112 rejections are overcome. Of these, claim 50 has been cancelled. Applicant asserts that claim 33, as amended, is also allowable if in independent form.

Obviousness rejections

The Examiner has rejected claims 1, 2, 6, 7, 13, 14, 21, 28, and 29. Claim 24 is not explicitly rejected under Section 103, and it is believed from review of the claim hierarchy that claim 24 is allowable for the same reason claim 17, from which it depends, is allowable. Claim 46 is not explicitly rejected under Section 103, and it is believed from review of the claim hierarchy that claim 46 is allowable for the same reason claim 11, from which it depends, is allowable.

The Examiner has rejected claims 1, 2, 13, and 14 under 35 U.S.C. 103(a) as being unpatentable over Ujhelyi et al (US 2003/0078621) in view of Rosborough et al (US 6,298,267). The Examiner has also rejected claims 6, 7, 21, 28, and 29 under 35 U.S.C. 103(a) as being unpatentable over Ujhelyi et al (US 2003/0078621) in view of Rosborough et al (US 6,298,267) as applied to claims 1 and 2 above, and further in view of Elsberry et al (US 5,662,689).

Applicants respectfully traverse the foregoing rejections in view of the above pending claims and for reasons set forth hereafter.

Claim 1 recites:

An apparatus for treating fibrillation of at least one chamber of a heart of a patient, comprising:

a fibrillation detector;

a defibrillator for defibrillating the chamber of the heart, wherein the defibrillator is connected to the fibrillation detector and effects defibrillation subsequently to a time interval after detection of the fibrillation;

a warning device, connected to the fibrillation detector, that delivers a warning signal when a fibrillation has been detected; and

a means for controlling the apparatus having a control input actuatable by the patient, wherein the control means is connected to the defibrillator and delays the time of a defibrillation if the control means receives a corresponding signal by way of the control input,

characterized in that the apparatus further comprises a condition detector that detects a hemodynamic condition of the heart, and the control means is connected to the condition detector and prevents a delay in the time of defibrillation when the condition detector detects a predetermined hemodynamic condition.

It is respectfully submitted that neither Ujhelyi et al (US 2003/0078621) nor Rosborough et al (US 6,298,267) teach or suggest the claimed invention. In particular, neither Ujhelyi et al (US 2003/0078621) nor Rosborough et al (US 6,298,267) teach or suggest preventing a delay in the time of defibrillation when the condition detector detects a predetermined hemodynamic condition as does the claimed invention. The condition detector of the claimed invention may detect several types of predetermined hemodynamic conditions such as, for example, ventricular fibrillation, heart output, and blood pressure as described in paragraph [0010] of the specification.

Ujhelyi et al (US 2003/0078621) describes an override circuit 107A and sensors 107B to detect when the patient is in a relaxed state and/or is sleeping (page 2, paragraph [0019] and page 3, paragraph [0024]) and then to override the delay in order to deliver the electrical therapy. However, the claimed invention, prevents a delay in the time of defibrillation when a predetermined hemodynamic condition (e.g., ventricular fibrillation, abnormal blood pressure, abnormal heart output) is detected. Paragraph [0005] of the specification states, “The term predetermined hemodynamic conditions is used to denote such conditions which require early or immediate treatment of the heart.” Therefore, the invention claimed in claim 1 is not overriding the delay in defibrillation based on a sensed relaxed or sleeping state of the patient but, instead, based on a sensed urgent condition (e.g., ventricular fibrillation) that requires early or immediate defibrillation such that the patient does not, for example, expire.

Rosborough et al (US 6,298,267) describes a hemodynamic sensor 86 to check for (detect) adequate blood flow (column 5, lines 19-36) after a defibrillation attempt, i.e., applying a therapy or shock (Fig. 6 and column 7, lines 6-24). Rosborough et al (US 6,298,267) does not teach or suggest preventing a delay in the time of defibrillation as does the claimed invention. In Rosborough et al (US 6,298,267), a defibrillation attempt (therapy or shock) has already occurred before the hemodynamic sensor 86 is used to check for (detect) adequate blood flow.

The combination of Ujhelyi et al (US 2003/0078621) and Rosborough et al (US 6,298,267) does not teach or suggest preventing a delay in the time of defibrillation based on a predetermined hemodynamic condition. Also, it is respectfully submitted that the person of ordinary skill would not have been motivated to combine the references in a manner that would render obvious the claimed invention since Ujhelyi et al (US 2003/0078621) is focused on overriding a delay when the

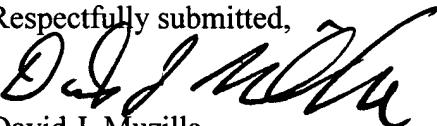
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Atty Docket 117163-33

patient is resting comfortably and Rosborough et al (US 6,298,267) is focused on checking for adequate blood flow after a defibrillation attempt.

In conclusion, there is no teaching, suggestion, or motivation by the combination of Ujhelyi et al (US 2003/0078621) and Rosborough et al (US 6,298,267) to prevent a delay in the time of defibrillation due to a detected predetermined hemodynamic condition.

In view of at least the foregoing, it is respectfully submitted that independent claim 1 defines allowable subject matter. Since claims 2-27, 29-49, 51-62, and 64-69 depend either directly or indirectly from claim 1, it is respectfully submitted that dependent claims 2-27, 29-49, 51-62, and 64-69 define allowable subject matter as well.

Accordingly, the applicant respectfully requests reconsideration of the rejections and objections based on at least the foregoing. After such reconsideration, it is urged that allowance of all pending claims will be in order.

Respectfully submitted,

David J. Muzilla
Registration No. 50,914

Hahn Loeser & Parks LLP
1225 West Market Street
Akron, OH 44313-7188
(330) 864-5550
Fax 330-864-7986
dmozilla@hahnlaw.com

CUSTOMER No. 021324